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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/641,223	08/17/2000	Lory Molesky	1958.2005-000	4357

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EXAMINER

CHANNAVAJJALA, SRIRAMA T

ART UNIT	PAPER NUMBER
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2177

DATE MAILED: 11/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/641,223

Applicant(s)

MOLESKY ET AL.

Examiner

Srirama Channavajjala

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 October 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-78 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-78 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other:

DETAILED ACTION

Response to Amendment

1. Examiner acknowledges applicants' amendment filed on 10/6/2003, paper no. # 4.
2. Claims 55-78 have been added, paper no. # 4.
3. Claims 1-78 are pending in this application.

Drawings

4. The drawings filed on 10/6/2003, paper no. # 5 are **approved** by the Draftsperson under 37 CFR 1.84 or 1.152.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1- 78 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baker et al., [hereafter Baker], US Patent No. 6338067 in view of Kwan-Liu Ma et al., [hereafter Kwan], Efficient Encoding and rendering of time-varying volume data, NASA/CR-1998-208424 ICASE Report No.98-22, June 1998

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6. As to Claims 1,8,11,19,26,29,37,44,47, 55,63,71, Baker teaches a system which including 'storing a plurality of raw data values organized as a series in a first database structure' [fig 1-2, col 4, line 18-29], plurality of raw data values are integral part of Baker's fig 1-2 because Baker teaches database structure, fig 2, element 200 is equivalent to the database element 112, fig 1, further entering the data into the computer database transforming the data documenting a database structure that integrates the various measures such as data analysis [see fig 7], it is also important to note that the data analyst retain the original data records or information, data analyst should always be able to trace a result from a data analysis back to the original forms on which the data was collected which is integral part of Baker's teaching, therefore, raw data values are integral part of Baker's fig 1, element 100, 'series of raw data values' [col 5, line 44-52], Baker specifically directed to data entry system element 118 that is used to load information or data in each field or respective fields for example as listed in the table I, 'associating the first and second database structures so the adjustment value is applied to the series of raw data values in response to retrieval'[col 4, line 18-29, col 6, line 49-53, table I-II], first and second database structures corresponds to Baker's relational database linkage between the quantitative information records element 212 and the company records element 214, more specifically, Baker directed to database structure as detailed in fig 2, further table I and table II are example of database structure, associating the first and second database structure corresponds to linking various subsets of the data fields listed in table I&II. It is however, noted that Baker et al. does not specifically teach 'plurality of intervals of

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adjusted data', 'creating view of the database' [see fig 1-2,], creating views is a common knowledge in relational database art, because create table, create view(s), create schema, create domain and like are integral part of relational database(s), also it is noted that Baker specifically suggests for example query can be constructed by query manager fig 1, element 110, therefore, create table, create view(s) are integral part of Baker's teaching. Baker especially teaches for example relational database as detailed in fig 1 and 2, further Baker also teaches for example database structure that including various data entry fields such as detailed in table I&II, it is also noted that these tables are connected or joined or established relational linkage between table I&II [col 6, line 49-53]. On the other hand, Kwan disclosed 'plurality of intervals of adjusted data' [page 1, introduction, line 17-24, fig 1, page 9, fig 5], intervals of adjusted data corresponds to Kwan's raw time varying data as detailed in fig 1].

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teachings of Kwan et al., into product/service hierarchy database for market competition and investment analysis of Baker et al. because they are both directed to relational databases, more specifically Baker is directed to product hierarchy database organized in such a way that it is accessible to users for quantitative analysis, further Baker also suggests linking database structure [see Abstract, fig 1-2, table I&II], while Kwan is directed to visualization of time-varying volumetric data sets obtained from various sources [see Abstract], further Kwan also suggests specifically raw time varying data, encoded time varying data with respect to data structures

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[see fig 1, fig 3], and both they are directed to analyzing data. One of ordinary skill in the art at the time of the invention would have been motivated to modifying Baker et al., reference, more specifically fig 1 to incorporate Kwan et al., fig 1, raw time varying database because that would have allowed users of Baker et al., product/service hierarchy database for market competition and investment analysis not only storing various information such as information related to investors, product related information but also have the advantage of storing time varying data.

7. As to Claims 2,12,20,30,38,48, 56,64,72, the limitations of this claim have been noted in the rejection of Claim 1 above. In addition, Kwan disclosed 'computing the adjustment value for each interval of adjustment data in response to the addition of a subsequent interval of adjustment data' [fig 1, page 2, 16-21, page 3, line 3-7].

8. As to Claims 3,13,21,31,39,49, 57,65,73, the limitations of this claim have been noted in the rejection of Claim 1 above. In addition, both Baker et al. and Kwan et al. disclosed 'first database and second database [see Baker: fig 1-2; Kwan et al: fig 1], further Baker and Kwan et al. disclosed 'mapping the second database structure to the first database structure' [Baker: fig 2, fig 6, table I&II, col 6, line 49-53, Kwan: fig 3], Baker specifically suggested for example relational database lineage between quantitative information records and company records.

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9. As to Claims 4,40, the limitations of this claim have been noted in the rejection of Claim 1 above. In addition, Kwan et al. disclosed 'raw data values represent a time series' [see fig 1], raw data values represent a time series corresponds to Kwan's raw time varying data as detailed in fig 1.

10. As to Claims 5,14,23,32,41,50, 58,66,74, the limitations of this claim have been noted in the rejection of Claim 4 above. In addition, Baker et al., disclosed 'time series tracks financial data' [see fig 7], financial data corresponds to various company stock(s) value with respect to daily, 52 week, last 1 month; last 3 month, year to data changes.

11. Claims 6-7,15-16,24-25,33-34,41-42,50-51,58-59,66-67,75-76, are rejected in the analysis of claims above and are rejected on that basis.

12. As to Claims 9-10,17-18,27-28,35-36,45-46,53-54, 61-62,69-70,77-78, Kwan teaches a system which including 'adjustment data includes data for a pending adjustment' [fig 1, page 1, line 17-24, page 2, line 20-21].

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13. Claims 55,63,71 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baker et al., [hereafter Baker], US Patent No. 6338067 in view of Stewart, US Patent No. 6195103

14. As to Claims 55,63,71, Baker teaches a system which including 'storing a plurality of raw data values organized as a series in a first database structure' [fig 1-2, col 4, line 18-29], plurality of raw data values are integral part of Baker's fig 1-2 because Baker teaches database structure, fig 2, element 200 is equivalent to the database element 112, fig 1, further entering the data into the computer database transforming the data documenting a database structure that integrates the various measures such as data analysis [see fig 7], it is also important to note that the data analyst retain the original data records or information, data analyst should always be able to trace a result from a data analysis back to the original forms on which the data was collected which is integral part of Baker's teaching, therefore, raw data values are integral part of Baker's fig 1, element 100, 'series of raw data values' [col 5, line 44-52], Baker specifically directed to data entry system element 118 that is used to load information or data in each field or respective fields for example as listed in the table I, 'associating the first and second database structures so the adjustment value is applied to the series of raw data values in response to retrieval'[col 4, line 18-29, col 6, line 49-53, table I-II], first and second database structures corresponds to Baker's relational database linkage between the quantitative information records element 212 and the company records element 214, more specifically, Baker directed to database structure as detailed in fig 2,

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further table I and table II are example of database structure, associating the first and second database structure corresponds to linking various subsets of the data fields listed in table I&II.

It is however, noted that Baker et al. does not specifically teach 'plurality of intervals of adjusted data', 'creating view of the database' [see fig 1-2,]. As best understood by the examiner, creating views is a common knowledge in relational database art, because create table, create view(s), create schema, create domain and like are integral part of relational database(s), also it is noted that Baker specifically suggests for example query can be constructed by query manager fig 1, element 110, therefore, crate table, create view(s) are integral part of Baker's teaching. Baker especially teaches for example relational database as detailed in fig 1 and 2, further Baker also teaches for example database structure that including various data entry fields such as detailed in table I&II, it is also noted that these tables are connected or joined or established relational linkage between table I&II [col 6, line 49-53].

On the other hand, Stewart disclosed 'plurality of intervals of adjusted data' [col 3, line 44-65, col 14, line 4-13, fig 7], intervals of adjusted data corresponds to Stewart time series data that represents real-time data as detailed in col 3, line 44-65.

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teachings of Stewart into product/service hierarchy

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database for market competition and investment analysis of Baker et al. because they are both directed to stock market trends, more specifically Baker is directed to product hierarchy database organized in such a way that it is accessible to users for quantitative analysis, further Baker also suggests specific stock group, industry trends report [see fig 7]], while Stewart is directed to volatility alert for display of time-series data, more specifically computing fluctuation of time series stock values on real time basis [see Abstract, fig 6B] and both they are directed to analyzing data. One of ordinary skill in the art at the time of the invention would have been motivated to modifying Baker et al., reference, more specifically fig 1 to incorporate Stewart computing fluctuation, computing distance from pattern of specific time to pattern at another time interval of fig 6B because that would have allowed users of Baker et al., product/service hierarchy database for market competition and investment analysis not only monitoring real time series data that represents change in stock values from time to time but also have the ability to displaying various time series data in different colors thereby recognizing various updates quickly as each new datum from each of the time series arrives as suggested by Stewart [see col 3, line 21-26], thus improving the quality and performance of the system.

Response to Arguments

Applicant's arguments filed on 10/6/2003, Claims 1-78 have been fully considered but they are not persuasive, for examiners response, see discussion below:

15. At page 14, line 8-10, Claims 1-54, applicant argues, Baker does not teach or suggest applying stored split data to stock pricing data, nor does Baker teach or suggest the claim adjustment data

At page 15, line 3-7, applicant argues, the cited references fail to suggest.....

As to the above argument, examiner disagree with the applicant because firstly Baker is directed to database for market competition and investment analysis, more specifically hierarchically organizing product database organizes company market performance and stock investment information [see Abstract], secondly, it is noted that Baker also specifically suggests database structure containing various modules for example quantitative module, qualitative module, product hierarchy, pricing module and like, the specific database structure is clearly disclosed in fig 2, element 200, further it is noted that Baker also specifically defines various fields that related to various modules as detailed in table I-II and they are integral part of database structure. Thirdly, it is noted that Baker specifically directed to pricing module that containing various fields such as symbol field, security split history record, split date, security prices, last price, time of last price, 52 week high, 52 week low and like [see col 8, line 45-62]. In the

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office action, examiner specifically stated that creating views is a common knowledge in relational database art, because create table, create view(s), create schema, create domain and like are integral part of relational database(s), further it is noted that Baker specifically directed to database structure [see fig 1-2] and querying database too, therefore, at minimum Baker teaches database structure qualified for querying data. In the office action, examiner clearly stated that Baker does not specifically teach plurality of intervals of adjusted data. On other hand, disclosed plurality of intervals of adjusted data as detailed in page 1, introduction, line 17-24, fig 1, page 9, fig 5,], as best understood by the examiner, Kwan specifically directed to organizing time varying volume data and improving on visualization of time-varying data.

The new Claims especially independent Claims 55,63,71 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baker et al., [hereafter Baker], US Patent No. 6338067 in view of Stewart, US Patent No. 6195103

Conclusion

The prior art made of record

a. US Patent No. 6338067

b. Kwan et al., Efficient Encoding and rendering

of time-varying volume data, Institute for computer applications in science and engineering, NASA Langley research center, VA, NASA/CR-1998-208424 ICASE

Report No.98-22, June 1998

c. US Patent No. 6195103

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure

d. US Patent No. 551024

e. US Patent No. 6401091

f. US Patent No. 6163781

g. US Patent No. 6272332

h. US Patent No. 6094650

h. US Patent No. 6553383

i. US Patent No. 5414838

j. EP0897149A1

k. WO99/32999

l. Asset control market data management, Business

and functional concepts, May 1999, version:0.1, pp1-15

m. Informix: printed in USA 7/99, pp1-27

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n. Rakesh et al., Managing temporal financial data in an extensible database, proceedings of the 19th VLDB conference, 1993, pp: 302-313

o. US Patent No. 5594898

q. US Patent No. 6317728

r. US Patent No 5946666

s. US Patent No 6026381

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.


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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Srirama Channavajjala whose telephone number is (703) 308-8538. The examiner can normally be reached on Monday-Friday from 8:00 AM to 5:30 PM Eastern Time. The TC2100's Customer Service number is (703) 306-5631.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E. Breene, can be reached on (703) 305-9790. The fax phone numbers for the organization where the application or proceeding is assigned are as follows:

703/746-7238	(After Final Communication)
703/872-9306	(Offical Communications)
703/746-7240	(For Status inquiries, draft communication)

Any inquiry of general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-9600.

sc 
Patent Examiner.
November 5, 2003.